CHAPTER EIGHT

FINDINGS AND RECOMMENDATIONS

The previous chapter of Arizona's Statewide Air Service Study used demand estimates for each of the airports being analyzed, along with a computer model, to identify the ability of each airport to support new or improved commercial airline service. This chapter provides a summary of statewide and market-specific air service improvements that appear most feasible. To a large extent, the feasibility of service improvements is based on a carrier's ability to make a profit on the recommended service improvements. Using the findings from the initial route analysis, a sensitivity review is provided to assess the probability of a carrier actually implementing identified service improvements. Follow-on action items for each of the communities and the State are also outlined in this final chapter of the study.

1. SUMMARY OF FINDINGS

The results of the route analysis for each of the study airports may be viewed as a best case scenario for near term air service improvements. While the findings from the route analysis for each of the study airports are summarized below, it is important to keep in mind that each of the study airports and the communities that are served by these airports will have to take follow-on actions to bring about changes in their commercial airline service. In the deregulated airline operating environment, new airline service and even existing service cannot be guaranteed, unless, of course, the service is fully subsidized. Sustaining and even more importantly improving commercial airline service to the communities analyzed in this study will take significant local and statewide commitment and effort. The results of this study provide each community with an understanding to the commercial air service improvements that they may be able to most realistically attract and support in the near term, if they can successfully increase their enplanements. But simply identifying these improvements as being potentially feasible by no means guarantees their implementation. Aside from locally lead follow-on efforts that will be needed to make these improvements a possible reality, there are continuing changes in the airline industry that bare watching. Changes in the airline industry as well as changes in the communities that are served by study airports both have the potential to impact potential air service improvements identified in this study. The "sensitivity" factors which could impact initial findings for all study airports are discussed in a subsequent section of this chapter. Major findings from the route analysis for each of the study airports are summarized below and are presented in **Table 8-1**.

A. Bullhead City/Laughlin

Existing year-round regularly schedule airline service to this market consists of four daily round trip flights on the Beech 1900 to Phoenix. In addition, several large charter carriers that operate jet aircraft provide service at the airport on a seasonal basis to serve the gaming and resort industry in this combined Arizona/Nevada market area. Estimates of potential

TABLE 8-1

Arizona Department of Transportation
Arizona Air Service Study

EXISTING SERVICE
(PAGE 1 OF 2)

Market	Nonstop Service	Schedule	Aircraft Type	Number of Daily Departures
Bullhead City/Laughlin	Phoenix	7-DAY	Beech 1900	4
Flagstaff	Phoenix	7-DAY	Dash-8-200B	6
Grand Canyon	Havasupai	5-DAY	Helicopter	1
	Las Vegas	7-DAY	Beech 1900	4
		7-DAY	Piper	2
		7-DAY	Fokker F27	3
		7-DAY	DHC-6	1
	Oakland	7-DAY	Gulfstream	1
	San Francisco	7-DAY	Gulfstream	1
Kingman	Prescott	6-DAY	Beech 1900	4
Lake Havasu City	Phoenix	7-DAY	Beech 1900	4
Page	Phoenix	7-DAY	Beech 1900	3
Prescott	Kingman	6-DAY	Beech 1900	4
	Phoenix	6-DAY	Beech 1900	4
Show Low	Phoenix	7-DAY	Beech King Air	3
Sierra Vista	Phoenix	7-DAY	Beech 1900	3
Yuma	Los Angeles	7-DAY	Embraer 120	6
	Phoenix	7-DAY	Beech 1900	6

TABLE 8-1

Arizona Department of Transportation
Arizona Air Service Study

SUMMARY OF SERVICE IMPROVEMENTS
(PAGE 2 OF 2)

Market	Hub	Schedule	Aircraft Type	Number of Profitable Daily Departures
Bullhead City/	Las Vegas	7-DAY	B-737-300	4
Laughlin	Los Angeles	7-DAY	B-737-300	3
	Phoenix	7-DAY	Beech 1900/Dash-8-200B	8
		7-DAY	Dash-8-200B	7
Flagstaff	Las Vegas	7-DAY	Embraer 120	7
		7-DAY	Canadair RJ-100	6
	Los Angeles	7-DAY	Canadair RJ-100	5
		7-DAY	Embraer 120	6
	Phoenix and Las Vegas	7-DAY	Dash-8-200B	10
	Phoenix and Los Angeles	7-DAY	Dash-8-200B	11
Grand Canyon	Phoenix	7-DAY	Beech 1900	3
Kingman	Phoenix	7-DAY	Beech 1900	1
		7-DAY	Beech King Air	2
		6-DAY	Beech 1900	2
		6-DAY	Beech King Air	3
Lake Havasu City	Las Vegas	7-DAY	Embraer 120	5
		7-DAY	Beech 1900	6
	Phoenix	7-DAY	Beech 1900	6
		7-DAY	Dash-8-200B	4
	Las Vegas (two-hub scenario)	7-DAY	Beech 1900	1
		7-DAY	Embraer 120	1
	Phoenix (two-hub scenario)	7-DAY	Beech 1900	4
Page	Phoenix	7-DAY	Beech 1900	8
		7-DAY	Dash-8-200B	6
	Las Vegas (two-hub scenario)	7-DAY	Embraer 120	3
	Phoenix (two-hub scenario)	7-DAY	Beech 1900	4
Prescott	Phoenix	7-DAY	Beech 1900	6
		7-DAY	Dash-8-200B	4
	Las Vegas (two-hub scenario)	7-DAY	Beech 1900	2
	Phoenix (two-hub scenario)	7-DAY	Beech 1900	3
Safford	Phoenix	7-DAY	Beech 1900	1
		7-DAY	Beech King Air	1
		6-DAY	Beech King Air	2
Sedona	Phoenix	7-DAY	Beech 1900	1
		7-DAY	Beech King Air	2
		6-DAY	Beech King Air	3
Show Low	Phoenix	7-DAY	Beech 1900	1
		7-DAY	Beech King Air	2
		6-DAY	Beech King Air	3
Sierra Vista	Phoenix	7-DAY	Beech 1900	7
		7-DAY	Dash-8-200B	5
Winslow	Phoenix	7-DAY	Beech 1900	1
		7-DAY	Beech King Air	1
		6-DAY	Beech King Air	1
Yuma	Los Angeles	7-DAY	Embraer 120	9
		7-DAY	Canadair RJ-100	7
	Phoenix	7-DAY	Dash-8-200B	10

Sources: Wilbur Smith Associates, Inc.
AirTech, Inc.

passenger demand for this market, how ever, indicate that if the airport is able to capture a higher percentage of its unconstrained demand for commercial airline travel, then scheduled airline service to an additional hub appears economically feasible. Results of the route analysis show that Bullhead City/Laughlin may be capable of supporting either three or four daily round trip flights on a Boeing 737 aircraft to either Los Angeles or Las Vegas. In addition, the route analysis shows that with potential demand levels not only can this market support new service to either Los Angeles or Las Vegas, but it can also support upgraded service to Phoenix. Results from the route analysis model show that the airport may be capable of supporting up to eight daily round trips to Phoenix on a Beech 1900 or seven flights a day to Phoenix on a Dash-8-200B aircraft.

B. Flagstaff

Scheduled commercial airline service in this market now consists of daily flights to Phoenix using both the Beech 1900 and the Dash-8-200B; a total of eight daily fights are provided. In addition to service to Phoenix, if potential demand levels are captured, the route analysis model shows that this airport may be capable of supporting additional scheduled airline service to either Las Vegas or Los Angeles. Using a 30-passenger Embraer aircraft, the route analysis model shows that seven daily flights between Flagstaff and Las Vegas would be economically viable. On this same route, a total of six daily round trips could be supported if the Canadair Regional Jet were used to provide the service. As an alternative to new service to Las Vegas, the route analysis model indicates that with potential demand estimates, Flagstaff could support six economically viable round trips per day on the 30-passenger Embraer to Los Angeles or five daily round trips on the Canadair Regional Jet. In addition to supporting new service to an additional hub, Las Vegas or Los Angeles, the route analysis indicates that the Flagstaff market may also be able to support improved service to Phoenix. If new service were provided to Las Vegas, 10 daily round trips on the Dash-8-200B between Flagstaff and Phoenix could be supported. If new service to Los Angeles were implemented, 11 daily round trips between Phoenix and Flagstaff could be economically viable.

C. Grand Canyon

Grand Canyon National Park Airport currently has regularly scheduled year-round commercial airline service. The airport is, however, served by a large number of charter carriers who operate primarily from Las Vegas airports to serve the high level of tourist traffic on short sightseeing trips to the Grand Canyon. While the airport is now only served by charter carriers, these flights provide non-tourist related visitor and resident related air travelers with access to the national air transportation system via scheduled carriers who operate at Las Vegas McCarran International Airport. Service is currently not provided, however, to Phoenix. Information provided from travel agents, businesses and others at the on-set of this study indicated that there are residents of and travelers to this airport's market

area who need access to the State's capital on a regular basis. Results of the route analysis show that non-Canyon related passenger demand should be able to support up to three profitable daily round trips between the airport and Phoenix. This service appears to be economically viable if it were provided on the Beech 1900 aircraft. This regularly scheduled commercial service appears to be viable even if the Grand Canyon continues to be served by its current level of charter airline service.

When assessing the commercial air service needs of the Grand Canyon market, it is important to distinguish between air travelers who are candidates to use regularly scheduled commercial airline service versus those whose are more logical candidates to use charter carriers. For 1997, the Gand Canyon National Park Airport enplaned more than 600,000 air travelers. The vast majority of these travelers combine a sightseeing trip to the Grand Canyon with a trip to Las Vegas. A notable number of these travelers come to Las Vegas and the Grand Canyon from foreign countries. These foreign travelers as well as U.S. residents who now fly on charter carriers to the Grand Canyon are traveling almost exclusively on tour packages. As a result, these travelers are not candidates to use regularly scheduled commercial airline service that could be provided between Phoenix and the Grand Canyon. It is possible that if regular airline service between the Grand Canyon and Phoenix were provided that there may be persons who have traveled to Phoenix on vacation who would take advantage of such service. Additional enplanements that could be attracted from this pool of travelers would help to make the three scheduled flights recommended between Phoenix and the Grand Canyon more financially solvent and ultimately could lead to market's ability to support either additional flights or larger aircraft on a Phoenix-Grand Canyon route.

D. Kingman

Kingman's current commercial airline service is subsidized through the EAS program. Flights that originate in Kingman stop in Prescott before continuing on to Phoenix. A Beech 1900 is presently used to serve the market and four daily "shared" round trips are provided to Phoenix on this aircraft. This study's potential demand estimates indicate that if Kingman were served as a stand alone market without subsidy, it would have the ability to support only one profitable round trip flight on a seven-day per week schedule using the Beech 1900 to Phoenix. Assuming a six-day per week schedule using the Beech 1900, two round trip flights to Phoenix appear financially feasible on a nonstop basis.

Because of the market's ties to Las Vegas and the fact that the majority of the travelers from the area are now driving to Las Vegas McCarran International Airport for their departures, service to Las Vegas was also analyzed. Assuming a seven-day per week schedule using either a 30-seat Embraer aircraft or the 19-passenger Beech 1900, two round trip flights to Las Vegas appear financially feasible on a nonstop, stand-alone basis. While the route analysis model showed that scheduled commercial airline service between Las Vegas and

Kingman may be feasible, there are currently no carriers operating at McCarran International who use a 19-seat regional/commuter aircraft to "feed" smaller cities into this larger hub airport. For this service to be realistic, a carrier to provide such service would need to be "created."

Model results indicate that using a Beech King Air, depending on the number of days per week the schedule is operated, either two or three flights per day could be supported to Phoenix. Analysis for this market indicates that without EAS subsidy or possibly aircraft with smaller seating capacities on commercial flights to Phoenix, existing scheduled commercial airline service to Phoenix in this market could be at risk.

E. Lake Havasu City

Lake Havasu City presently has four daily round trip flights on the Beech 1900 to Phoenix. The route analysis model indicates that with potential demand levels identified for this market, the aircraft could be upgraded to a Dash-8-200B and four daily round trips could continue to be supported. This finding is based on the market's ability to capture an estimated 24,619 annual enplanements. If service were provided to Las Vegas instead of Phoenix, the route analysis model revealed five daily round trips on a 30-passenger Embraer aircraft or six daily round trips on a Beech 1900 could be supported.

The route analysis shows that if existing service to Phoenix is maintained on the Beech 1900 at its current frequency, Lake Havasu City has only limited capability to support service to a second airline hub; only one daily round trip to Las Vegas is economically viable according to model results. All of these findings are based on the market's ability to capture its potential demand level of 24,619 annual enplanements. Potential demand levels for this market indicate that focusing service on one hub may be preferable to splitting passenger demand between two airline hubs. The route analysis shows that the market has the ability to support larger aircraft, at a similar rate of frequency to existing service, to Phoenix or to support larger aircraft at a slightly higher daily frequency to Las Vegas.

F. Page

Page presently has scheduled commercial airline service to Phoenix; this service is provided on the Beech 1900 at a frequency of three daily round trips. Using potential demand estimates developed in this study, the route analysis model indicates that this market may be able to support six daily round trips to Phoenix on the larger Dash-8-200B aircraft. If the smaller Beech 1900 continues to be used to provide scheduled airline service between Page and Phoenix, the model shows that eight daily round trips appear economically viable. The route analysis reveals that the level of service between Page and Phoenix on the Beech 1900 could be increased to four daily round trips and that sufficient demand could also be available to support three daily round trips on the 30-passenger Embraer to Las Vegas. For

Page, either improved service to Phoenix appears viable or current Phoenix service could be maintained and additional service to Las Vegas implemented. It is important to note that existing service to Page is subsidized through the EAS program; this indicates that achieving potential passenger demand estimates for this market may be difficult. Consequently, the probability of actually enhancing scheduled airline service to this study airport must be viewed cautiously.

G. Prescott

Prescott's existing commercial air service to Phoenix is linked with service that originates at Kingman. Commercial airline service to both Kingman and Prescott is presently subsidized through the EAS program. There are presently four round trips per day to Phoenix on the Beech 1900 that are shared by these two markets. If Prescott were able to capture all of its potential passenger demand, the route analysis model indicates that Prescott could be capable of supporting four daily round trips on the larger Dash-8-200B aircraft or six daily round trips on the Beech 1900 to Phoenix. Again, assuming that Prescott is capable of capturing its potential enplanement estimate, the market's current service (three daily round trips to Phoenix on the Beech 1900) could be maintained and additional service (two flights per day on the Beech 1900) could be implemented to Las Vegas. Given this market's history and current subsidized service, it would probably be in the Prescott market's best interest to focus its air service improvement efforts on one versus two hubs. Improving service to Phoenix on the larger Dash-8-200B aircraft would be in the best interest of this airport's near and long-term air service.

H. Safford

While currently without scheduled commercial airline service, Safford was examined for its ability to support financially self-sufficient airline operations in the near term. The route analysis shows that, based on potential demand levels estimated for this market, only one daily round trip on the Beech 1900 between Safford and Phoenix could be operated at a profit. Serving the market with a smaller aircraft, such as the Beech King Air which seats nine passengers, and reducing service from seven to six days a week results in the market's ability to support two profitable round trip flights. Even if this study airport were capable of capturing its full potential demand level, the opportunities for supporting economically self-supporting traditional commercial airline service are limited.

It is important to note that in analyzing the ability of the Safford market to support scheduled commercial airline service, that potential demand for commercial air travel from nearby communities such as Clifton and Duncan was also considered. As noted earlier in this report, the demand for commercial airline service in any given market area is influenced by a number of factors which include things like population, income, employment, and tourism.

As result, it is difficult to definitively say what level of population a particular market area would need to grow to before it could support scheduled commercial airline service that was economically self-sustaining. The type of airline service that the community desires in terms of service frequency and the size of the aircraft that serves the market also varies. Each community's standards and expectations as to what constitutes "acceptable" scheduled airline service are not the same. For some communities, only service that is provided by a "brand name' carrier is acceptable. For other communities, an unaffiliated carrier who provides "air access" to a larger hub airport may be suitable. As a result of varying needs and expectations, population levels needed to support each community's individual standards for adequate commercial airline service also vary.

Analysis completed as part of this study indicated that for all market areas served by study airports, annual enplanements per population average 0.58. Further, findings from the route analysis model show that in order for an airport in Arizona to support 3 daily round trips on a Beech 1900 aircraft to Phoenix, annual enplanement levels in the 15,000 to 17,000 range are required. Three daily round trips on a 19-seat aircraft is considered to be a minimal level of scheduled commercial airline service. If the market in question does not experience higher than average passenger diversion to a larger commercial service airport, this indicates that, all other factors being equal, a population base in the 30,000 range is required to support this level of commercial airline service.

This analogy between population in a market area and its ability to support economically self-sustaining commercial airline service must be taken very cautiously. As has already been demonstrated in this study, with a resident population base of less than 5,000, the Grand Canyon market area records annual enplanements which exceed 600,000 because of the community's draw of both domestic and foreign tourists. This example, clearly illustrates the point that population alone does not necessarily determine a market's air service demand. Therefore, simply saying that a community needs to grow to a certain population level before it can support economically viable commercial airline service can be misleading. It is safe to say, however, that as Arizona's smaller market area's, including Safford, continue to grow and develop, the opportunities for these communities supporting a minimal level of economically self-sustaining commercial airline service will most likely also increase.

I. Sedona

Scheduled commercial airline service is not presently available in this market, but its notable level of tourism indicates that potential demand levels may be sufficient to support at least a modest level of scheduled airline service in the near term. It is important to note that scheduled airline service has been provided to Sedona at various times in the past, but that the service has not been maintained on a consistent basis. Model results indicate that, based on potential demand levels developed as part of this study, one daily round trip on the Beech 1900 could be operated at a profit between Sedona and Phoenix. Using the nine-passenger

Beech King Air and a six-day per week flight schedule, the route analysis model indicates that Sedona may be capable of supporting three profitable daily round trips to Phoenix based on this study's potential demand estimate. It is possible that some type of subsidy may be required to support the initiation of service to this market.

While Sedona presently does not have scheduled commercial airline service, it once did. Scheduled airline service was started by a resident of the area in the late 1970s. In this time frame and up until early 1990, service between Sedona and Phoenix was provided on a Cessna 172 or 182 aircraft. In the early 1990's, the local entrepreneur sold his business to Scenic Airlines. At one point, this airline served Sedona with as may as four or five daily round trips to Phoenix. For financial reasons, however, Scenic discontinued service to this market in 1995, and Sedona has been without scheduled airline service since.

The Sedona market does attract a number of tourists on an annual basis. Some of this market's "tourism" is actually related to "second home" owners from the Phoenix area. This segment of the market is not considered to be a viable candidate to use commercial airline service. Further, many of the tourists who visit the area come in conjunction with a trip to Phoenix, and their travel to Sedona is via a tour bus. The cost differential between the tour bus and scheduled commercial airline service does not make these tourists viable candidates to use regularly scheduled commercial airline service. The Sedona market area, from a geographic standpoint, actually falls within the radius of the market area for the airport serving Flagstaff. Further, the Sedona market is less that 120 miles from Phoenix. Most of the tourist and resident related air travelers for this market area find it suitably convenient to use the scheduled commercial airline service available at Flagstaff, or they drive to Phoenix.

Competition rather than demand is probably the biggest obstacle to bringing regularly scheduled commercial airline service back to this market. Demand for air travel to the Sedona market may be more appropriately served by charter carriers, air taxi operators, or privately owned general aviation aircraft. As a result of this market's proximity to competing airports, along with the nature of the market's tourist trade, the market's opportunities for recapturing its air service market are limited. This market's best chances for reinstating scheduled commercial airline service most definitely rest in scenarios that include the use of locally funded operating subsidies and in aircraft that have smaller than 19 seat passenger configurations.

J. Show Low

Three flights per day on the Beech King Air are presently provided between Show Low and Phoenix using an aircraft that has been purchased by the community. This aircraft was purchased to ensure air service is provided to the community. The community is also reportedly pursuing steps with the FAA to have the market included in the EAS program.

Should Show Low be included as a eligible point in the EAS program, they would qualify for carrier operating subsidies from the Federal government. Results of the route analysis for this market show that if service were upgraded to a Beech 1900, only one round trip per day could be operated at a profit to the carrier. Based on the market's estimated demand potential, three daily round trips between Show Low and Phoenix on the nine-passenger Beech King Air appear to be profitable on a six-day per week schedule. This indicates that existing service is well matched to the market's characteristics.

Show Low's market base contains a notable number of seasonal residents who reside on a more permanent basis in either Tucson or Phoenix. Air service demand in the Show Low market is heightened by the fact that the market is more than a four hour drive from the State's large commercial service airports in Tucson and Phoenix. Commercial bus or rail service to this market does not compete commercial airline service.

Show Low has taken a unique approach to insuring the provision of commercial airline service. Over the years, the Show Low market has been served by several carriers. These carriers were as follows: 1979-1982 Ponderosa; 1993-1995 Azpac; 1995-1996 Scenic; and 1996-1997 Great Lakes. Great Lake actually served the Show Low market for less than one year. The Show Low community finally grew weary of providing operating subsidizes to carriers who ultimately would leave the market. Each time a subsidized carrier exited the market, the community was left with nothing to show for its investment. As a result, Show Low came up with a new strategy which can serve a model for other small communities throughout Arizona. The City of Show Low bought a plane and then entered into an operating agreement with a carrier to fly this plane on a regularly scheduled basis. Service started under this arrangement in May of 1998 with a 10 year operating agreement between the City and the carrier, Sunrise.

At first, the service was provided with a Navajo Chiefton. The City then replaced this aircraft with a larger King Air [200 series]. The cost of the aircraft was approximately $1.3 million with the cost for converting this plane from its original 13 passenger configuration to a 9 passenger configuration estimated at an additional $600,000 The seating capacity of the aircraft was downsized so that the airport/airline would not have to comply with Part 121 requirements. It was estimated that the cost of complying with Part 121 requirements would add an additional $200,000 annually to the cost of providing service. The City also provides a non-disclosed operating subsidy to the carrier on an annual basis. The original Navajo aircraft now serves as a backup plane for the King Air. Sunrise leases the plane from the City for $1. The City helps to promote the carrier's service with television, newspaper, and radio advertising. The City helps to support the service by getting City employees to use the service when they have to travel to Phoenix.

Reception of the service has reportedly been very good, and the City feels that their investment in airline service has been justified. Round trip tickets between Phoenix and Show Low are priced between $150 and $189, depending on advanced purchase. The service is patronized by both recreational and business travelers. The carrier is reportedly operating at a 50 to 60 percent load factor. This is despite the fact that carrier does not have a code sharing agreement with a major carrier serving Phoenix, nor does the carrier plan to try to obtain such a code sharing agreement.

K. Sierra Vista

Existing scheduled commercial airline service to this market consists of five round trips per day to Phoenix on the Beech 1900. Among study airports, Sierra Vista is somewhat unique. It has the most significant level of passenger erosion to Tucson and its geographic location within Arizona limits its ability to be connected to either Las Vegas or Los Angeles by turboprop aircraft. The route analysis for this market focused accordingly on its ability to support improved commercial airline service to Phoenix. If Sierra Vista were able to capture its potential demand, the number of round trips between the market and Phoenix on the Beech 1900 could, in theory, be increased from the current level of five to seven. While higher service frequency levels are generally desired as a characteristic of good commercial airline service, this market may wish to consider reducing frequency to support a larger aircraft such as the Dash-8-200B. Model results indicate that a Dash-8-200B aircraft could be used on a Sierra Vista-Phoenix route on a seven-day per week schedule with up to five daily round trip flights.

L. Winslow-Holbrook

Winslow is currently without scheduled commercial airline service. Several different route analyses were undertaken for this market to examine its ability to support economically viable commercial airline service. Results of the route analyses showed that even operating the nine-passenger Beech King Air on a six-day per week schedule results in the market being able to support only one profitable round trip to Phoenix. The route analyses showed that scheduled commercial airline service for this study airport does not appear economically viable.

The discussion on population as it relates to the demand for commercial airline service for the Safford market is equally applicable to the Winslow-Holbrook market. There really is no magic formula that says when a community reaches a certain level of resident population, it has a demand for commercial airline service that is capable of supporting service that is financially self-sustaining. As noted previously, the number of enplanements needed to support three profitable round trips from most of the rural communities in Arizona to Phoenix on a Beech 1900 aircraft is in the 15,000 to 17,000 range. Information gathered as part of this study revealed that the enplanement per capita ratio for all market areas served

by study airports is 0.58. This indicates that a minimum population level of 30,000 would be required to generate this level of annual demand. It is important to reiterate, however, that the demand for commercial airline service is driven by many factors in addition to population. These factors include things such as tourism, income, and employment. The level of competition from other airports also greatly influences the number of enplanements that can be captured by a local airport when its market area has a population base in the 30,000 range.

Both the Safford and the Winslow markets are candidates for the erosion of their base of enplanements because of their relative proximity to other airports. Passenger erosion from the Winslow-Holbrook market is most likely to take place to Flagstaff. Flagstaff is located roughly 70 to 90 miles west of the Winslow-Holbrook market area via Interstate 40. The volume of commercial airline service provided at Flagstaff is certainly significantly more limited than the commercial airline service that is available at either Tucson or Phoenix; this may help the Winslow market to support commercial airline service in the future. Passenger diversion from the Safford market is probably most impacted by the significant level commercial airline that is available at Tucson. However, the distance of the Safford market from Tucson, more that 125 miles [some of which is not interstate highway] may help to stem the flow of passengers from this market should commercial airline service be initiated.

M. Yuma

Yuma is the only study airport that currently has regularly scheduled airline service to two hubs, Los Angeles and Phoenix. Results of the route analysis showed that Yuma can support improved service to both of its existing hubs. Service to Los Angeles is presently provided on a 30-passenger aircraft at a frequency of five round trips per day. The route analysis showed that Yuma is capable of supporting 9 daily round trips on a 30-seat aircraft to Los Angeles or 7 daily round trips on a 50-passenger regional jet. Service to Phoenix now consists of six daily round trips; this service is provided by a mix of Dash-8-200B and Beech 1900 aircraft. The route analysis showed that Yuma could support up to 10 profitable daily round trips to Phoenix, all on the larger Dash-8-200B aircraft.

Results from the route analysis show that the level of potential passenger demand that is associated with this market can most appropriately be served via two distinct airline hubs. The analysis did not indicate that potential demand levels are sufficient to support scheduled airline service to three hubs. As with many of the communities that have been included in this analysis, information provided by citizens, airport officials, travel agents, and representatives of the community at large indicates a general level of dissatisfaction with airline fares between Yuma and the hub airport (i.e., Phoenix or Los Angeles). While through fares from Yuma via each of the hubs tend to be more competitively priced, point-to-point service to the hub is perceived by the community as being unreasonably high. In the past, the community has also been unhappy with the reliability of the service by the carrier on the

Yuma to Phoenix route. Recent changes is Mesa's operating structure that have occurred as a result of new controls exerted by America West have reportedly begin to address some of the community's past concerns with their airline service; most notably, the reliability and the on-time performance of the carrier have shown some improvement since the on-set of this study.

2. SENSITIVITY ANALYSIS

As previously noted, for each of the study airports to achieve the results identified through the route analysis process, each airport must increase its passenger capture rate to a level commensurate with the potential demand levels identified in this study. It is possible that passenger erosion from the service areas of certain study airports may continue at a rate that could preclude the achievement of identified service improvements. This section identifies those markets for which findings from the route analysis could be at risk because of the continued erosion of passengers at rates higher than predicted. Further, findings from the route analysis for some study airports could also be at risk if the Beech 1900 or a similarly sized aircraft is no longer used to provide service to Arizona markets. If higher than predicted passenger erosion rates continue or if a 19-seat aircraft is not available to provide scheduled commercial airline service, operational subsidies would be one alternative that communities could consider to implement service improvements identified through the route analysis. The following sections identify and discuss those study airports whose air service improvements identified through the route analysis could be at risk either through higher than anticipated passenger erosion rates or through the disappearance of smaller regional/commuter aircraft from the operating fleet used in Arizona.

A. Demand Sensitivity

The analysis conducted to date as part of this statewide air service evaluation for Arizona has shown that each of the study airports is losing a significant percentage of its associated air travel demand to other competing airports. According to results of surveys conducted for this study, air travelers often leave the market area of the airport they are associated with and drive to a more distant airport to begin their commercial airline travel. In most cases, these passengers are still using an Arizona airport, either Tucson or Phoenix, to access the national air transportation system. There are, however, some passengers that are leaving the State and initiating their air travel from airports such as Las Vegas McCarran International and Albuquerque International.

Chapter Six of this study provided detailed estimates of the total number of air travelers believed to be leaving their associated market area to begin their scheduled airline trip from a more distant commercial service airport. Each study airport's total level of commercial airline travel has been described in this study as unconstrained demand. Unconstrained passenger demand estimates developed in this study represent the number of travelers who are now using commercial airline service on a regular basis for travel to and from Arizona.

The unconstrained passenger demand estimates represent both residents of Arizona as well as visitors to the State. Survey results showed that passengers leave their local market areas to access larger aircraft, more frequent service, non-stop service, more reliable service, different airlines, and lower fares.

As a result of the size of the airports being analyzed in this study, it is important to note that they will continue to compete for their associated demand levels, in some cases not only with each other, but more often with larger airports both within and beyond Arizona. The analysis conducted in previous chapters recognized that because of this competition, a number of passengers from each of the study airports would continue to drive to more distant airports to begin their airline travel rather than to depart from their local airport. This "sensitivity" from highway competition was recognized in previous chapters through the development of "potential" demand estimates. For each study airport, the difference in its total unconstrained demand estimate versus its potential demand estimate reflects the number of air travelers who will continue to be lured by the highway to more distant airports for their airline trip originations. **Table 8-2** reflects for each study airport the number of passengers that will most likely continue to choose a competing airport for their airline travel.

TABLE 8-2

DEMAND SENSITIVITY

Market	Total Unconstrained Enplanements	Potential Enplanements	Enplanements Lost to Highway	Percent of Demand Lost to Highway
Bullhead City	267,058	120,176	146,882	55%
Flagstaff	151,800	98,670	53,130	35%
Grand Canyon	39,500	15,800	23,700	60%
Kingman	15,714	8,643	7,071	45%
Lake Havasu City	41,031	24,619	16,412	40%
Page	69,251	34,626	34,625	50%
Prescott	47,824	19,130	28,694	60%
Safford	37,602	5,640	31,962	85%
Sedona	41,896	6,284	35,612	85%
Show Low	27,857	6,964	20,893	75%
Sierra Vista	54,609	27,305	27,304	50%
Winslow-Holbrook	28,656	4,298	24,358	85%
Yuma	153,398	107,379	46,019	30%

Sources: Wilbur Smith Associates, Inc.
AirTech, Inc.

By reducing each airport's unconstrained demand levels to a potential demand level, the sensitivity factors that cause current passenger diversion from each market have been recognized and are reflected in Table 8-2 as the number of enplanements in each market that are lost to the highway. The route analysis conducted in Chapter Seven used only the potential demand estimate for each market to determine what service improvements could theoretically be supported at each study airport, even if the highway continues to lure passengers from the service area of each study airport to more distant, competing airports.

For some of the study airports, higher than anticipated passenger erosion could occur, and these airports would still be able to generally support at least some of their identified service improvements. For other airports analyzed in this study, if passenger diversion rates continue at levels higher than anticipated, the ability of these airports to support even the most modest improvements to their scheduled commercial airline service will be questionable. Table 8-2 shows the percentage of each market's potential enplanement estimate that this study assumes will continue to drive to a more distant competing commercial service airport to begin their airline travel. If this identified percentage of diverted passenger demand is above the percentage shown in Table 8-2, service improvements identified for each market in Chapter 7 could be jeopardized.

To test the impact of higher passenger diversion rates on route analysis findings for each study airport, potential demand levels for each airport were reduced by 10 percent. Route analysis findings for each study airport were then reviewed to identify where service improvements could be at risk if highway competition continues to erode local demand levels. Results of this sensitivity review are presented in **Table 8-3**. As shown in this table, the route analysis findings for most study airports would be impacted, to some extent, with a 10 percent reduction in the potential demand levels. For some of the study airports, service improvements are so marginal that if potential demand levels cannot be achieved, opportunities for improving scheduled commercial airline service are eliminated.

Results of the demand sensitivity for the study airports can be summarized as follows:

- Bullhead City/Laughlin - recommendations still viable at a reduced flight frequency
- Flagstaff - recommendations still viable at a reduced flight frequency
- Grand Canyon - service at risk
- Kingman - service at risk
- Lake Havasu City - service to one hub viable; two hub service at risk
- Page - recommendations still viable at a reduced flight frequency

TABLE 8-3

Arizona Department of Transportation
Arizona Air Service Study

IMPACT OF 10% DEMAND REDUCTION ON ROUTE ANALYSIS FINDINGS

Airport	Service Improvements	Findings
Bullhead City/Laughlin	Jet Service to Las Vegas	Still feasible at a reduced daily frequency
	or	
	Jet Service to Los Angeles	Only two flights are viable; service more difficult to attract
	and	
	Dash-8 Service to Phoenix	Four daily round trips can still be supported
Flagstaff	30-Passenger Regional Jet Service to Las Vegas	Can still be supported at a slightly reduced frequency
	or	
	30-Passenger Regional Jet Service to Los Angeles	Can still be supported at a slightly reduced frequency
	and	
	Upgraded Service to Phoenix	Four daily round trips on Dash-8 can be supported even with Las Vegas or Los Angeles service
Grand Canyon	19-Passenger Service to Phoenix	Service would be at risk with reduced demand
Kingman	One daily Beech 1900 or two daily Beech King Airs	Service not viable with demand reduction
	Two daily 30 0r 19 passenger to Las Vegas	Service not viable with demand reduction
Lake Havasu City	Service to both Phoenix and Las Vegas	Could not be supported
	30-Passenger Service to Las Vegas	Supportable at three to four flights per day
	or	
	19-Passenger Service to Phoenix	Supportable at four to five flights per day
Page	19 or 30-Passenger Service to Phoenix	Could still support four to five daily round trips
	or	
	30-Passenger Service to Las Vegas and 19-Passenger Service to Phoenix	Still able to support two and three daily flights, respectively
Prescott	19 or 30-Passenger Service to Phoenix	Could still support three daily Dash-8s and four daily Beech 1900s
	or	
	Service to both Phoenix and Las Vegas	Could not be supported
Safford	One daily Beech 1900 or two daily Beech King Air	Service not viable with demand reduction
Sedona	One Beech 1900 or two or three Beech King Air	Service not viable with demand reduction
Show Low	Three daily Beech King Air	Service not viable with demand reduction
Sierra Vista	19 or 30-Passenger Aircraft Service to Phoenix	Can still support four daily round trips
Winslow-Holbrook	One Beech 1900 or one Beech King Air	Service not feasible with demand reduction
Yuma	30-Passenger or Regional Jet Service to Los Angeles	Four daily round trips can still be supported
	and	
	Upgraded Dash-8 Service to Phoenix	Up to three or four daily round trips could still be supported

Source: AirTech, Inc.

- Prescott - service to one hub viable; two hub service at risk
- Safford - service at risk
- Sedona - service at risk
- Show Low - service at risk
- Sierra Vista - recommendations still viable at a reduced flight frequency
- Winslow-Holbrook - service at risk
- Yuma - recommendations still viable at a reduced flight frequency

If potential demand (shown in Table 8-2) deviates by 10 percent, opportunities for improving scheduled commercial airline service (identified in Chapter 7) for eight of the 13 study airports could be adversely impacted. Six of these airports could be at risk of losing service with demand reductions, however, four of the six "at risk" airports are currently without regularly scheduled airline service today.

B. Aircraft Size Sensitivity

At the onset of this statewide air service analysis, a variety of information was presented which documented national trends in the commercial airline industry. One of the trends that has the greatest potential to effect not only service improvements, but also existing commercial airline service in Arizona, relates to the size of the aircraft being flown by regional/commuter carriers. According to the Regional Airline Association, most regional/commuter carriers are upgrading their operational fleets. In most cases this means bringing aircraft with greater seating capacities into their operating fleets and in many cases it also means introducing regional jet aircraft. In some cases, regional/commuter carriers have near term plans to operate only regional jet aircraft, while other carriers have plans to gradually discontinue the use of aircraft which seat as few as 19 passengers. Specifically, Mesa Airlines, the operator of America West Express in Phoenix, has recently announced the sale of additional Beech 1900 aircraft as part of the company's fleet restructuring plan. Mesa staff have also noted that, due to "higher than anticipated maintenance costs and new regulatory requirements"[1], the cost of operating the Beech 1900 is becoming uneconomical. Without reductions in the operating costs of these aircraft, Mesa has indicated that they "will continue to reduce the number of these aircraft (Beech 1900s) in our fleet." Mesa is taking delivery of new 50-passenger jets to add to the airline's fleet of Canadair Regional Jets,

[1]Jonathan Ornstein, President and CEO of Mesa Airlines, Company Press Release, February 25, 1999.

Dash-8-200s, and other Beech 1900s. Mesa's claims and its plans related to reducing the number of aircraft that it has with smaller seating capacities are consistent with those of regional/commuter carriers throughout the U.S.

The passenger volumes for many of the airports analyzed in this study make them particularly vulnerable to the trend of declining small-capacity aircraft. As noted in the findings from the route analysis, some of the airports analyzed in this statewide air service study do not have sufficient demand levels to support even the 19-passenger aircraft. Several of the airports analyzed in this study that currently have scheduled commercial airline service will be relegated to service on 9-passenger aircraft, assuming a carrier who operates this equipment can be recruited.

Some airline industry analysts have speculated that with the continued deployment of regional jet aircraft into the fleet of the regional/commuter carriers and the discontinuation of service by 19-passenger aircraft, many communities currently served by this size of aircraft will no longer have commercial air service. These same analysts, whose reports are contained in the Regional Airline Association's annual report, predict that as regional/commuter carriers take delivery of larger aircraft, the aircraft with smaller seating capacities will disappear from the airline operating fleet. In the past, as new generation regional/commuter aircraft have come on line, new carriers or other carriers have picked up the older equipment and continued to operate planes with smaller seating capacities. The Regional Airline Association believes that in the current airline operating environment the days of the 19 seat and smaller regional/commuter aircraft are over. Recent trends in Arizona communities, however, have shown that there may indeed be new carriers who find it both advantageous and profitable to operate smaller regional/commuter aircraft. New regional/commuter start-ups in communities such as Show Low are using innovative methods to provide viable air service matched to community needs.

This study assumes that options will be available to provide some form of commercial airline service to small Arizona markets analyzed in this study. However, the current trend of regional/commuter operators toward larger aircraft has the potential to adversely impact the route analysis findings for several study airports. It is important to note that this sensitivity factor is a concern only if carriers operating smaller aircraft are not available to serve Arizona markets. **Table 8-4** identifies those airports that could be at risk of losing existing or improved service without the availability of the 19-passenger aircraft. As shown in Table 8-4, scheduled commercial airline service at six study airports (Grand Canyon, Kingman, Safford, Sedona, Show Low, and Winslow-Holbrook) could be at risk without a 19-seat or smaller aircraft. It is important to note that four of these six airports, Grand Canyon, Safford, Sedona, and Winslow-Holbrook, presently have no regularly scheduled year-round commercial airline service. Existing service to Kingman and Show Low could fall into the "at risk" category. Existing commercial airline service to both of these study airports is in

some way subsidized. Operating subsidies may be needed in the future for several study airports to either attract or sustain scheduled commercial airline service.

TABLE 8-4

AIRCRAFT SENSITIVITY

Airport	Service at Risk with Loss of 19-Passenger or Smaller Aircraft
Bullhead City/Laughlin	No
Flagstaff	No
Grand Canyon	Yes
Kingman	Yes
Lake Havasu City	No
Page	No
Prescott	No
Safford	Yes
Sedona	Yes
Show Low	Yes
Sierra Vista	No
Winslow-Holbrook	Yes
Yuma	No

Source: AirTech, Inc.

3. OPERATING SUBSIDY ANALYSIS

As part of the Essential Air Service (EAS) program, federal dollars are allocated to support scheduled commercial airline service to three of the study airports. The airports receiving EAS funds serve Kingman, Page, and Prescott. The Grand Canyon is also eligible to participate in the EAS program, but has not historically applied for funding due to the high level of service that has been provided by the existing charter-type carriers. Without increased demand levels in the three existing EAS markets, operating subsidies are considered necessary to support scheduled commercial airline service. Congress periodically challenges the EAS program during the federal budgeting process. It is possible that at some point airline operating subsidies from this program will disappear or at least be significantly reduced both in terms of dollars allocated and the airports that qualify for such federal subsidies.

Supporting commercial airline service through operating subsidies is costly. Further, for airports that are part not of the federal airport system, funds for such subsidies must come from a source other than airport operating revenues. Local subsidies that support commercial airline service should usually be considered only as a last resort. If subsidies are used to attract service and the ridership

for the service does not materialize to make the service economically self-supporting, operating subsidies become permanent. As will be noted in this section, even subsidizing a minimal level of commercial airline service is costly. From an economic and transportation perspective, however, some communities may consider such operating subsidies to be in their best interest for either securing airline service or supporting improved service. Actual airline operating subsidies would be driven by many factors that would ultimately be the subject of negotiations between the serving airline and the community. To provide a perspective on the potential cost of subsidizing airline service, estimates of the costs to subsidize service for study airports whose service was judged to potentially be at risk were developed. Those study airports whose proposed service was determined as being at risk were identified in previous sections.

In order to provide communities benchmarks for determining their ability and the desirability of considering locally subsidized airline service, cost ranges for annual operating subsidies were identified. The adequacy of commercial airline service is often judged by two key parameters, the frequency of the service and its reliability. To provide Arizona communities a benchmark for evaluating airline-operating subsidies, it was assumed that a minimum of three daily round trips would be required. This level of service is similar to the federal standard for service frequency adopted as part of the EAS program.

The cost of providing operating subsidies increases as the size of the aircraft being flown increases. While aircraft with smaller seating capacities are less costly to subsidize, as previously discussed, most carriers, especially those who code share with major/national carriers at the airline hubs, are moving away from smaller aircraft as they purchase aircraft with minimum seating capacities for 30 passengers. While communities may be able to more readily support a carrier flying smaller, less costly aircraft, these flights may lack the benefits that code-sharing connecting flights have. These benefits could range from baggage transfer, to gate proximity of connecting flights, to through fares to the passenger's final destination. Communities need to consider these and other factors if they choose to subsidize service provided by non-code sharing carriers.

Table 8-5 shows annual operating costs for various service scenarios for those communities whose existing or proposed service was determined to be at risk. The costs shown in this table represent the estimated total annual operating costs for the aircraft shown. In many cases, when a community subsidizes service, it is done through seat guarantees. While arrangements for this type of operating subsidy can vary, in many cases the community puts the annual operating cost into an escrow account. For each passenger that the carrier actually enplanes, the community's operating subsidy is not charged. Theoretically, when the carrier attracts a sufficient number of passengers to make the service profitable, no funds are extracted from an escrow account. Conversely, if passengers do not use the service, the community pays the difference between the number of passengers actually carried and the annual cost of providing the service. It is important to note that the costs shown in Table 8-5 are all for Beech 1900 or Beech King Air aircraft. The cost of subsidizing service on a larger aircraft, for instance a Dash-8-200B, would increase. The cost of operating three daily round trips from communities in Arizona to Phoenix on a Dash-8 ranges from an estimated annual low of

$773,400 to a high of over $1.7 million with the average cost of these trips estimated at $1.2 million. With the retirement of aircraft with smaller seating capacities, this information is important for Arizona communities to consider as they formulate their own individual action plans to address the air service needs of their communities.

TABLE 8-5

OPERATING SUBSIDIES

Airport	Service	Annual Service Subsidy 1/
Grand Canyon	Beech 1900 Phoenix	$985,865
Kingman	Beech 1900 Phoenix	$833,295
	Beech King Air	$559,545
Safford	Beech 1900	$777,085
	Beech King Air	$521,585
Sedona	Beech 1900	$561,370
	Beech King Air	$377,045
Show Low	Beech 1900	$697,515
	Beech King Air	$467,930
Winslow-Holbrook	Beech 1900	$709,195
	Beech King Air	$476,323

1/ Based on three daily round trips; seven days per week
Source: AirTech, Inc.

4. RECOMMENDATIONS

Air service improvements identified in this statewide air service study must be implemented from the bottom up, not the top down. In other words, action will be required by the communities that are served by the study airports to realize the opportunities for air service improvements that have been identified in this study. While the State can continue to provide technical assistance to communities analyzed in this study and fund facility improvements that could be required to support new or improved commercial airline service, the State is not an appropriate body to either solicit or fund air service improvements identified for study airports. There are, however, actions that are appropriate on the statewide level that can be considered to implement study recommendations. The final portion of this statewide air service study identifies actions considered appropriate throughout the State, as well as actions that appear best suited to each study airport.

A. Statewide Actions

It appears that communities and study airports throughout Arizona have similar air service issues and concerns. In general, these relate to facilities, fares, airlines, and economics. As previously noted, these same issues and concerns have been raised in other communities in other states throughout the U.S. Previous portions of this study have outlined steps that have been taken by other states to improve air service. Statewide air service studies, funding for marketing programs, and facilitating carrier discussions are a few of the common approaches currently being used in other statewide aviation programs. These programs have had varying degrees of success, but most state officials note that without funding to support air service programs the environment is not likely to change for small communities. Arizona may want to consider implementing other air service improvement programs based on future funding availability.

The Federal Aviation Administration, in an effort to improve passenger safety, continually upgrades facility requirements for airports that receive scheduled commercial airline service. The Department of Transportation, through statewide system planning and individual airport master planning, should place a high priority on funding projects and improvements that are required to support commercial airline service. While the cost of airline fares is a top issue throughout Arizona, in the deregulated airline-operating environment, there is little that the State of Arizona can do to address or lower fares. One of the most important fare related issues identified throughout the State relates to the cost of travel from study airports to Phoenix. This issue should definitely be included as part of all community/airport specific action plans that are formulated as a result of this study.

A general unwillingness seems to exist on the part of the carrier to lower fares between Phoenix and outlying communities in Arizona. A program to provide lower fares in off peak travel times to increase load factors could be in the best interest of both the airports and the airline and should be discussed. While the State has little authority over the airlines that serve its communities, the State may be able to play a role in facilitating discussions between the airlines, in particular Mesa and America West, and the airports that were analyzed in this study. The State of Arizona stands to benefit economically if opportunities for improving air service identified in this study can be implemented. If communities served by study airports continue to lack commercial airline service that is perceived as being reliable and acceptable in terms of its quality, there is a potential for significant adverse economic and transportation impacts throughout Arizona. These impacts could affect the State's ability to attract and retain businesses, its level of tourism and could lead ultimately to increased highway travel.

Recognizing concerns related to commercial airline service that were uncovered during this study, statewide and airport-specific action items have been identified. These action items are seen as being the foundation for community-specific action plans that will follow this

statewide study. This Air Service Study provides each community with information on the following:

- Total unconstrained air travel demand associated with the service area of each study airport
- The percentage of each airport's total unconstrained demand that is presently being served
- Estimates of the upper bound capture rate for air travelers for each study airport as expressed by its "potential" enplanements
- Viable opportunities for supporting new or improved commercial service

Using this and other information contained in this study, there are certain actions that are appropriate for all communities who seek to improve their scheduled commercial airline service. It is important for communities served by the study airports to understand that if air service is to be improved, further action is needed on the local level. If a community has not already started locally based air service initiatives, it is recommended that each of the study airports and the communities they serve consider establishing a task force. Broad-based local involvement is ultimately critical to the success of an air service action plan. A meaningful task force needs to include representation from local businesses, tourism, elected officials, the airport, and travel agents. Once established, a local task force can help to prioritize follow-on actions related to implementing air service improvements.

For each community to be in the best position to respond to air service opportunities, it is important for them to have as much data on their market as possible. There are several ways that airports/communities can collect data on the customer base within its service area, but travel agent and passenger surveys are two of the best sources of information. While a limited number of travel agent and passenger surveys were completed in support of this statewide air service study, Arizona communities may wish to consider additional surveys to provide more extensive data on their passenger base. Airport managers will need to play an important role in the survey process. If communities develop marketing strategies as part of their follow-on action plans, having information on the businesses and institutions that use commercial air service on a regular basis can be an important underpinning to the success of such a marketing plan.

As noted, all study airports lose and will continue to lose part of their unconstrained demand for commercial airline travel to competing airports; this situation is not expected to change. Airports throughout Arizona that serve small and rural communities will always be subject to competition from larger commercial service airports both within and beyond the State. To support opportunities for improving commercial airline service outlined in this report,

however, it is important that each community take whatever steps are prudent to stem the outflow of passengers. From information obtained during on-site meetings throughout the State, it was determined that travelers leave their local service areas most frequently because they perceive service as being unreliable and fares as being unreasonably high. One activity that a local task force can undertake is the implementation of a fare watch program. Such a program needs the support of local travel agents. Working with local travel agents, the task force can publish fares to top markets that are available from the local airport. In many cases, airline travelers "think" fares from the local airport are significantly higher; therefore, they drive to a more distant airport to begin their travel. In reality, fares to many top destinations from the local airport may not be significantly higher. Through task force activities, this type of information needs to be publicized on a continual and ongoing basis.

Working with travel agents in the market area is critical to the success of any type of fare watch plan. Travel agents are working members of the community, and they need to understand the potential transportation and economic ramifications to the community they live in if scheduled air service is curtailed, or in the worst case scenario, if it fails. It is important for travel agents to understand that when they sell a ticket and book a departure for a competing airport, there are several potential consequences. Once established, a local task force must educate travel agents concerning the means by which airports obtain operating and development funds. Travel agents need to be aware that airports derive a substantial portion of their funding for capital improvement projects from funds that are collected via passenger facility charges (PFCs) or through FAA entitlement funding that is apportioned to the airport based on the number of passengers it enplanes. Through the task force, this type of important information can be distributed to both area businesses and travel agents.

Business travelers are usually key to the success of commercial airline service in small communities. A successful local air service action plan needs to reach out and include the business community. From the viewpoint of the business traveler, reliability and frequency are usually the keys to good air service. The lack of these two qualities in current air service for study airports has resulted in business travelers leaving their local market area. For communities throughout Arizona to reach their potential demand levels identified in this study, actions on the local level will be needed to convince business travelers who have abandoned the local airport to return. Developing a strong rapport with area businesses that use or rely on the airport is an important part of any follow-on action plan that is adopted locally. One of the most important and earliest efforts that a local task force should undertake is the restoration of the public's image of air service at the local airport. Each task force will need to launch efforts to recapture or to capture air travelers who are using more distant, competing airports.

As part of their action plan, communities need to strengthen their relationship with their incumbent carrier or carriers. As part of the route analysis, opportunities for new or

improved commercial airline service were identified for most study airports. Study airports/communities may, as part of their follow-on action plan, seek to implement these service improvements either with their incumbent or new carriers. Airlines receive many requests for new or improved service. To make the most of their airline contacts, each community that seeks service improvements should have a specific marketing package prepared for submission to the candidate carrier. Much of the airport/community specific information contained in this study can serve as a basis for the development of this type of package.

B. Airport-Specific Action Plans

This section discusses those items that appear to warrant follow-on efforts for each study airport. In some instances, these action items are opportunities for new service or improvements to existing service. Communities throughout Arizona with a sincere interest to improve their commercial airline service should use the information in this document as the basis for developing their own individual action plan. As such plans are prepared, each community should recognize obvious limitations that may need to be considered related to plan implementation.

Results of the route analyses have shown that when potential demand levels are considered, many of the study airports now served by the Beech 1900 have the potential to support service on the larger Dash-8-200B aircraft. While Mesa Airline's current fleet acquisition plans include the introduction of an increased number of larger aircraft, this airline's existing fleet does not permit the wholesale substitution of the Dash-8-200B for the Beech 1900 in all Arizona markets. This fact should be factored in as each community develops a viable action plan.

To avoid frustration on the local level, it is important for each community to recognize that while service may be feasible according to the route analysis, carriers may not have the equipment (aircraft) to provide improved service in the near term. Communities throughout Arizona need to be aware that initiatives to improve air service are generally not overnight success stories. A typical response time for a carrier to actually begin new or improved service to a community, once the opportunity has been identified, can be up to 24 months. It should be recognized that the air service improvements that are discussed below for each of the study airports might take time. This study is only the first of many steps that communities throughout Arizona need to take to address their air service issues and concerns.

The following sections summarize, on a community-specific basis, those air service improvements that appear to warrant follow-on efforts as part of local action plans. Service improvements that were identified by the route analysis in Chapter 7 were almost exclusively airport to airport, with no intermediate stop. Currently, the only "tag" service that is

presently being flown in Arizona links Kingman to Phoenix via Prescott. There are several reasons that service which links multiple communities to the connecting hub is generally not preferable, if the community can support point-to-point service.

Typically, tag service is not preferable for most communities. This is because of the additional time that it takes to make an intermediate stop on the way to the hub airport. As noted throughout this report, many air travelers associated with Arizona's small and rural markets now drive to a more distant airport to begin their airline travel. If air travelers find it less convenient to fly than to drive because of the added time that it takes to make an additional stop at an intermediate point on the way to the hub, increased passenger erosion may occur. Passengers also resist this type of tag service because of the perceived safety risks involved. Passengers are aware of the fact takeoffs and landings are statistically the segments of fight in which most accidents typically occur. As a result, additional passenger erosion could be anticipated with tag service between two or more cities to the hub. Finally, the airlines themselves typically resist tag service. The landing and takeoff portions of an airline trip are for the carriers the most expensive segments of the trip. As a result, tag service is also more costly to the carrier thereby often making it less feasible.

The route analysis conducted for each of the study airports in the previous chapter indicated that all airports have at least some potential for supporting direct service between their community and a hub airport. These service options should be pursued first by each community that seeks to implement air service improvements identified by this study. If attempts to obtain service recommendations identified by this study prove unsuccessful, smaller and rural Arizona communities examined in this study may consider approaching carriers to provide service to a hub which would link multiple communities together.

1. Bullhead City/Laughlin

The airport serving Bullhead City and Laughlin should work with its incumbent carrier to secure larger aircraft and an increased flight frequency to Phoenix. Based on the potential demand estimate for Bullhead City/Laughlin, the route analysis model showed that the market is currently capable of supporting all Dash-8-200B aircraft to Phoenix. While demand to Phoenix alone may not be sufficient to support the increase in aircraft size, the Bullhead City/Laughlin market has a substantial amount of visitor traffic traveling to the area that would theoretically use the connecting service available in Phoenix to travel to and from the area.

The route analysis showed that in addition to its Phoenix service, the community appears to be capable of supporting scheduled airline service to one additional airline hub. It will be important to determine on the local level whether service to Las Vegas or to Los Angeles best meets the community's needs. Once this is determined, the community should prepare further analysis and marketing strategies to attract a carrier to provide service to a second

hub. Coordination with the charter carriers should continue to identify if service to Las Vegas or Los Angeles would impact the service currently provided by these carriers. While charter service has provided the Bullhead City/Laughlin market with access to many additional markets over the past few years, a consistent service to either Las Vegas or Los Angeles may be more beneficial to the area over the long term. From the community's standpoint, service to Los Angeles may be better suited. A large number of the travelers who are attracted by the area's gaming industry come to the area from Southern California.

2. Flagstaff

As its first priority, the Flagstaff community should work with its current carrier to upgrade all flights to Phoenix to the Dash-8-200B aircraft and to increase the daily frequency of these flights. The recent upgrade of the weekday service to all Dash-8s has helped to provide additional seating capacity; however, these aircraft may also be useful on the weekend routes to provide more capacity. The route analysis indicated that in addition to its service to Phoenix, the airport could support service to one additional airline hub. Therefore, local initiatives should be taken to determine if additional airline service to Las Vegas or Los Angeles is best suited to the community.

On the local level, the community has conducted independent air service analyses that identified Salt Lake City and Los Angeles as potential hubs for service from Flagstaff. The analyses noted that service to either of these hubs could help the market recapture some of the passengers who are currently driving to Phoenix for use commercial air service. These analyses have been used in marketing potential air carriers to provide service to Flagstaff. This local emphasis on air service development shows the community's commitment to ensuring that viable commercial air service is provided on a long-term basis to Flagstaff. Continued action should be taken to market and hopefully attract additional scheduled airline service to a second airline hub.

3. Grand Canyon

The current service provided at Grand Canyon National Park Airport does provide opportunities for local residents to access the national air transportation system primarily via charter flights to Las Vegas. This service, while providing access, is not scheduled, it is not year-round, and it does it provide southbound access to Phoenix, the State capital. Airport personnel estimate there are as many as 15,800 enplanements associated with non-tourist related air travel that might be accommodated on regularly scheduled commercial air carriers. This estimate, however, likely includes some portion of travelers that are currently being accommodated on the existing charter service.

This study has determined that, based on the potential demand estimate of 15,800 enplanements, approximately three flights per day using a 19-passenger aircraft could be supported. As with all of the other model results contained in this study, this conclusion assumes that the airport could actually capture all potential demand to support Phoenix service. Those passengers lost by the charter carriers would be insignificant in terms of overall demand for the charter service. The airport should work with prospective carriers who would provide regularly scheduled commercial air service between the Grand Canyon and Phoenix to accommodate primarily non-tourist related demand. Extensive local efforts would need to be undertaken to advertise new service if and when it becomes available.

4. Kingman

The analysis conducted as part of this study did not identify a large market for commercial air travel in Kingman. The route analysis model results indicated that continued "tag" service with Prescott helps to make service between Phoenix and Kingman more viable.

As previously noted, while the existing service is attracting a low level of passenger activity, primarily based on the perceived high fares in the market, the airport is working with potential new carriers to develop a strategy to increase demand and attract ridership. The Kingman market is closely aligned with Las Vegas; airport personnel estimate, based on local travel agency survey results, that over 90 percent of the market's passenger base uses Las Vegas McCarran International as the origin for their commercial airline trips. If service were provided to Las Vegas instead of to Phoenix, passengers have indicated the market's viability may be increased. One possibility that has been discussed is a routing that starts in Phoenix, stops in Prescott, stops in Kingman, and ends in Las Vegas. This routing would provide both markets (Kingman and Prescott) with access to two large airports with many carrier options. While this service cannot be effectively modeled using the route analysis model effectively, it appears that this linear linking of cities may present opportunities to increase passenger demand. These carrier options should continue to be pursued by Kingman to provide better air service options to the community. Other airline opportunities related to regional/commuter carriers operating at Las Vegas McCarran International should be monitored by the community.

If the existing service from Kingman to Phoenix is maintained as it is currently operated, it appears that continued operating subsidies will be required to maintain even a minimal level of service in this market. Steps on the local level should focus on exploratory talks to identify local funding sources in the event that the federal EAS program is curtailed or eliminated.

5. Lake Havasu City

Existing service in the Lake Havasu City market is provided only to Phoenix. While the route analysis examined the potential for service to two hubs (Phoenix and Las Vegas), the results of the analysis showed that only limited service could be supported to Las Vegas if Phoenix service were continued. Therefore, it is recommended that follow-on efforts for this community be focused on maintaining and improving service to Phoenix. The community/airport should work with its incumbent carrier to increase the number of daily flights on the Beech 1900 between Lake Havasu City and Phoenix. As larger aircraft become available, the community should seek reinstatement of its current daily round trip flight frequency of four and seek to obtain service on the Dash-8-200B aircraft. The latter of these efforts may serve this community better in the long-term as carriers retire 19-seat aircraft.

If, as proposed a recent new entrant airline provides regional/commuter service from Las Vegas to feed larger markets outside Las Vegas, Lake Havasu City could consider pursuing such service. If the airport/community is successful in improving service provided by the incumbent carrier and increasing passenger demand, service to a second hub may prove to be beneficial for both the incumbent carrier and a new carrier. Second hub service is unlikely in the near term, but should be monitored by the local community.

6. Page

Efforts on the local level should be taken to increase ridership to a level where scheduled airline service can readily be supported in Page without operating subsidies. While this community theoretically has the ability to support service to an additional hub, given its history, it may be more prudent for the community to first work with its incumbent carrier. Discussions with the incumbent carrier should focus on increasing flight frequency and using aircraft with higher seating capacities on the route between Page and Phoenix. The primary objective of any follow-on action plan, however, should be to stimulate passenger demand in the market to the point where operating subsidies are not required. Monitoring of the EAS program is also highly recommended for Page. Steps on the local level should focus on identifying potential local funding sources in the event that the federal EAS program is curtailed or eliminated.

7. Prescott

Current airline service in the Prescott market is linked with Kingman. As its main priority, the community should work to increase its enplanements to attract a level of demand that results in profitable service, independent of operating subsidies. While the route analysis model indicates that Prescott could be capable of supporting four daily round trips on the larger Dash-8-200B aircraft or six daily round trips on the Beech 1900 to Phoenix, the model

assumes that Prescott is capable of capturing its potential enplanement estimate. The model also indicates that the market's current service to Phoenix using the Beech 1900 could be maintained and additional service on the Beech 1900 could be implemented to Las Vegas. It is recommended that the community initially focus on securing larger aircraft and an increased level of daily flights to Phoenix before pursuing other air service improvements. With the continued decline in usage of 19-passenger aircraft, securing service on larger aircraft should be a top priority.

As noted in the Kingman discussion, service on a routing that starts in Phoenix, stops in Prescott, stops in Kingman, and ends in Las Vegas has been considered. This routing would provide both markets (Prescott and Kingman) with access to two large airports with many carrier options. While this service cannot be modeled using the route analysis model effectively, it appears that this linear linking of cities may present opportunities for both markets to increase demand.

The Prescott market should continue to monitor the situation in Las Vegas while working with the incumbent carrier to secure service to Phoenix using larger aircraft. Service to Las Vegas may be an option to enhance air service in the market in the long term.

8. Safford

Sufficient demand does not appear to currently be present in the Safford market to support a modest level of economically self-sustaining, scheduled commercial airline activity. This is not to say that at some point service may not be possible in Safford as conditions change in the community. If commercial airline service is a near-term high priority in this market, the community may wish to explore the Show Low model or discuss opportunities with existing charter carriers in the region. Local funding sources to subsidize airline service should be identified as well.

It should be noted that there are existing charter carriers who are interested in providing commercial service to this community based on business demand. A carrier is working with businesses in several communities to identify the level of demand that is present, the service that can be supported with their existing aircraft fleet, and the timing that would be needed to make the service viable. This carrier may present an opportunity for the Safford community to obtain commercial air service.

9. Sedona

Sedona should also consider following the Show Low model if the community determines that commercial airline service is a priority. Historically, service has been provided to Sedona to support the tourist industry, however, this service has not been maintained by a carrier on a long-term basis. The level of demand identified for this market and competition

from other commercial airports indicates that local financial support may be required to initiate and sustain commercial airline service to Sedona. This market does not appear to be a candidate for the larger regional/commuter carriers that operate in Arizona. Follow-on efforts should initially be geared to a carrier who would provide service with a small aircraft, possibly the Beech King Air.

As previously discussed, there are existing charter carriers who are interested in providing commercial service to Arizona communities based on demand generated by business travelers. As part of an action plan, the community should identify business or leisure travelers in the Sedona area that are sincerely interested in supporting scheduled commercial air service.

10. Show Low

The Show Low market's existing approach to providing commercial airline service appears to be well matched to the community's capabilities for supporting scheduled service. The community's pragmatic approach to providing access to the nation's air transportation system should serve as a model for other communities examined in this study. Follow-on efforts should be geared toward increasing ridership on existing service. Information contained in this study provides additional means for the community to market its service to increase ridership.

11. Sierra Vista

Sierra Vista is currently has service from Phoenix at a regular frequency, but with a 19-passenger aircraft. This community's air service goal should be to work with its incumbent carrier to upgrade the size of the aircraft serving the market, while maintaining its current flight frequency. Demand levels identified in this study for the Sierra Vista market indicate the market is on the borderline for being able to support larger turboprop aircraft at an adequate frequency level. The route analysis model shows that larger aircraft cannot be supported at the market's current daily flight frequency. It is likely that if larger aircraft are used in this market, flight frequencies would need to be reduced or local operating subsidies provided. It appears that Sierra Vista's demand will be sufficient to allow the market to maintain service if and when the existing carrier replaces its existing 19-passenger aircraft with larger aircraft.

12. Winslow-Holbrook

Demand in the combined Winslow-Holbrook market may not warrant the pursuit of scheduled commercial airline service in the near term based on results of this study's analysis. Even the Show Low model for commercial airline service would have a difficult time succeeding in this market due to the low level of demand. If the communities pursue

commercial airline service, an ample local source for the subsidization of airline service would need to be identified as a first step. Use of charter service is considered more viable in the Winslow-Holbrook area to serve demand for commercial air travel.

13. Yuma

As the only market in the State that currently has service to two airline hubs, Phoenix and Los Angeles, Yuma is considered to be well positioned to address its commercial air service needs. The community has developed an active task force and has worked with the incumbent carriers to discuss airline issues. While these issues may not yet be resolved, persistent communication with the carriers will help Yuma to secure future improvements. Yuma should continue to work with its incumbent carriers to increase its frequency of daily service to both Los Angeles and Phoenix. Analyses contained in this study indicate that a higher frequency can be supported with justification for nine daily round trips on a 30-seat aircraft to Los Angeles or seven daily round trips on a 50-passenger regional jet. The route analysis showed that Yuma can support up to 10 profitable daily round trips to Phoenix, all on the larger Dash-8-200B aircraft.

It appears at this time that pursuit of scheduled airline service to a third airline hub may not be in the community's best interest. The task force should continue to monitor service provided at the existing hubs and any new service that is initiated by regional/commuter carriers in the Western U.S.

5. SUMMARY

The foregoing sections have summarized actions that may be considered to improve commercial airline service to study airports in Arizona. It is important to restate that in the deregulated environment in which the nation's domestic airlines operate, education is the most readily available tool to bring about change and improvement. Information contained in this report provides a foundation for the next steps that must be taken by airports and communities throughout Arizona to address potential air service improvement.